

## INTERNATIONAL SEARCH REPORT

PCT/GB 02/00096

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 H01Q1/22 H01Q1/24 H01Q9/04 H04B7/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 H01Q H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 049 705 A (XUE HONGXI) 11 April 2000 (2000-04-11) column 4, line 45 -column 5, line 18; figures 3A,3B ---	1-10,13
A	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 12, 29 October 1999 (1999-10-29) & JP 11 186947 A (UNIDEN CORP), 9 July 1999 (1999-07-09) abstract ---	1-10,13
A	EP 0 543 645 A (MOTOROLA INC) 26 May 1993 (1993-05-26) column 2, line 1 - line 41; figure 1 ---	1-10,13 -/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

21 March 2002

Date of mailing of the international search report

23.05.02

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 03, 30 March 2000 (2000-03-30) & JP 11 340885 A (CANON INC), 10 December 1999 (1999-12-10) abstract ---	1-10,13
A	US 5 138 328 A (HAMILTON ROBERT W ET AL) 11 August 1992 (1992-08-11) abstract; figures 2,3 ---	1-10,13
A	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 13, 30 November 1998 (1998-11-30) & JP 10 209739 A (NEC CORP), 7 August 1998 (1998-08-07) abstract ---	1-10,13
A	US 4 803 491 A (HIKUMA HIDEO) 7 February 1989 (1989-02-07) abstract -----	1-10,13

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-10, 13

### Remark on Protest

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

International Application No. PCT/GB 02/00096

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-10,13  
Antenna arrangement
2. Claims: 11,12  
Communication system

## INTERNATIONAL SEARCH REPORT

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Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 6049705	A	11-04-2000	NONE			
JP 11186947	A	09-07-1999	NONE			
EP 0543645	A	26-05-1993	EP JP	0543645 A1 5335826 A	26-05-1993 17-12-1993	
JP 11340885	A	10-12-1999	NONE			
US 5138328	A	11-08-1992	NONE			
JP 10209739	A	07-08-1998	NONE			
US 4803491	A	07-02-1989	JP JP JP AT DE DE EP	1631154 C 2055961 B 62262502 A 102401 T 3789161 D1 3789161 T2 0246026 A2	26-12-1991 28-11-1990 14-11-1987 15-03-1994 07-04-1994 30-06-1994 19-11-1987	